

WHAT IS CLAIMED IS:

1. A wellbore junction system, comprising:
- 5 a wellbore junction including at least first, second and third bores extending longitudinally through a single portion of the wellbore junction; and
- a casing string connected to the wellbore junction,
- wherein the wellbore junction has a pressure rating of at least 50% of a pressure rating of the casing string.

10

2. The wellbore junction system according to claim 1, wherein the wellbore junction is configured to resist at least 6,000 pounds per square inch differential pressure applied between any two of the first, second and third bores.

15 3. The wellbore junction system according to claim 1, wherein the wellbore junction is configured to resist at least 6,000 pounds per square inch differential pressure applied between an exterior of the wellbore junction and any of the first, second and third bores.

20 4. The wellbore junction system according to claim 1, wherein each of first, second and third tubular strings provide flowpaths between a respective one

of the first, second and third bores and a respective one of first, second and third wellbores.

5 5. The wellbore junction system according to claim 4, wherein each of the first, second and third tubular strings is sealingly secured to the respective one of the first, second and third bores.

10 6. The wellbore junction system according to claim 4, further comprising first and second ones of the wellbore junction, the third tubular string providing a flowpath between the third bore of the first wellbore junction and a fourth bore of the second wellbore junction.

15 7. The wellbore junction system according to claim 4, wherein a fourth tubular string provides a flowpath to a fourth bore of the wellbore junction and is positioned in a fourth wellbore.

20 8. The wellbore junction system according to claim 7, wherein the fourth bore is in communication with each of the first, second and third bores in the wellbore junction.

9. The wellbore junction system according to claim 1, wherein the first, second and third bores are radially spaced apart in the wellbore junction

portion by approximately 120 degrees about a longitudinal axis of the wellbore junction.

10. The wellbore junction system according to claim 1, further
5 comprising first and second ones of the wellbore junction, the third bore of the first wellbore junction being in communication with a fourth bore of the second wellbore junction.

11. A wellbore junction, comprising:

a first portion including at opposite ends thereof a tubular string connection, and first, second and third bores;

a second portion having the second and third bores extending
5 therethrough, and a lateral exit of the first bore; and

a third portion having the third bore extending therethrough, and a lateral exit of the second bore.

12. The wellbore junction according to claim 11, wherein the wellbore
10 junction is configured to resist at least 6,000 pounds per square inch differential pressure applied between any two of the tubular string connection and the first, second and third bores.

13. The wellbore junction according to claim 11, wherein the wellbore
15 junction is configured to resist at least 6,000 pounds per square inch differential pressure applied between an exterior of the wellbore junction and any of the tubular string connection and the first, second and third bores.

14. The wellbore junction according to claim 11, wherein the first
20 portion first tubular string connection is in communication with each of the first, second and third bores.

15. The wellbore junction according to claim 11, further comprising a first deflector formed on the second portion, the first deflector being aligned with the lateral exit of the first bore.

5 16. The wellbore junction according to claim 15, further comprising a second deflector formed on the third portion, the second deflector being aligned with the lateral exit of the second bore.

10 17. The wellbore junction according to claim 16 wherein the first deflector is positioned between the lateral exit of the first bore and the lateral exit of the second bore.

15 18. The wellbore junction according to claim 17, wherein the second deflector is positioned between the lateral exit of the second bore and an exit of the third bore.

 19. The wellbore junction according to claim 18, wherein the third bore exit is substantially parallel to the tubular string connection.

20 20. The wellbore junction according to claim 19, wherein the wellbore junction is configured to resist at least 6,000 pounds per square inch differential

pressure applied between any two of the tubular string connection and the first, second and third bores.

21. The wellbore junction according to claim 19, wherein the wellbore
5 junction is configured to resist at least 6,000 pounds per square inch differential pressure applied between an exterior of the wellbore junction and any of the tubular string connection and the first, second and third bores.

22. A method of forming a wellbore junction system, the method comprising the steps of:

installing a wellbore junction in a well, the wellbore junction having a tubular string connection, and first, second and third bores formed in the
5 wellbore junction;

inserting one at a time each of first, second and third tubular strings into a respective one of the first, second and third bores; and

mechanically sealing each of the first, second and third tubular strings to the respective one of the first, second and third bores.

10

23. The method according to claim 22, wherein the installing step further comprises positioning the wellbore junction in an underreamed cavity.

24. The method according to claim 23, wherein the installing step
15 further comprises connecting the tubular string connection to a fourth tubular string.

25. The method according to claim 24, wherein the connecting step further comprises providing communication between the fourth tubular string
20 and each of the first, second and third bores.

26. The method according to claim 23, wherein the installing step further comprises installing first and second ones of the wellbore junction, the third bore of the first wellbore junction being in communication with the tubular string connection of the second wellbore junction.

5

27. The method according to claim 26, wherein in the installing step, the second wellbore junction is smaller in size than the first wellbore junction, and wherein the first wellbore junction is positioned in a first wellbore portion having a greater inner diameter than a second wellbore portion in which the
10 second wellbore junction is positioned.

15

28. The method according to claim 22, further comprising the step of providing the wellbore junction having a pressure rating of at least 50% of a pressure rating of a casing string connected to the tubular string connection.

29. The method according to claim 22, further comprising the step of configuring the wellbore junction to resist at least 6,000 pounds per square inch differential pressure applied between any two of the first, second and third bores.

20

30. The method according to claim 22, further comprising the step of radially spacing apart by approximately 120 degrees the first, second and third bores in a single portion of the wellbore junction.

31. The method according to claim 22, wherein the installing step further comprises:

plugging at least two of the first, second and third bores; and
5 then flowing cement about the wellbore junction in the well.

32. The method according to claim 22, further comprising the step of securing each of the first, second and third tubular strings to the respective one of the first, second and third bores.

33. A method of forming a wellbore junction system, the method comprising the steps of:

installing at least first and second wellbore junctions in a well, each wellbore junction having at least first, second and third bores formed therein;
5 and

providing communication between the third bore of the first wellbore junction and a fourth bore of the second wellbore junction.

34. The method according to claim 33, wherein the installing step
10 further comprises positioning the first wellbore junction in an underreamed cavity.

35. The method according to claim 33, further comprising the steps of:
extending each of first, second and third tubular strings into respective
15 first, second and third wellbores; and
sealingly connecting each of the first, second and third tubular strings with the respective first, second and third bores of the first wellbore junction.

36. A method of forming a wellbore junction system, the method comprising the steps of:

providing at least first and second wellbore junctions, each wellbore junction having at least first, second and third bores formed therein, and the
5 second wellbore junction being smaller in size than the first wellbore junction;
and

installing the first and second wellbore junctions in a well, the first wellbore junction being positioned in a first wellbore portion having a greater inner diameter than a second wellbore portion in which the second wellbore
10 junction is positioned.

37. The method according to claim 36, further comprising the step of providing communication between the third bore of the first wellbore junction and a fourth bore of the second wellbore junction.

15

38. The method according to claim 36, wherein the installing step further comprises positioning the first wellbore junction in an underreamed cavity.

20 39. The method according to claim 36, further comprising the steps of:
extending each of first, second and third tubular strings into respective first, second and third wellbores; and

sealingly connecting each of the first, second and third tubular strings with the respective first, second and third bores of the first wellbore junction.

40. A method of forming a wellbore junction system, the method comprising the steps of:

installing a wellbore junction, the wellbore junction having first, second and third bores formed therein;

5 extending each of first, second and third tubular strings into a respective one of first, second and third wellbores; and

sealingly connecting each of the first, second and third tubular strings with a respective one of the first, second and third bores.

10 41. The method according to claim 40, wherein the installing step further comprises positioning the wellbore junction in an underreamed cavity formed in a fourth wellbore.

42. The method according to claim 41, wherein the installing step
15 further comprises connecting the wellbore junction to a fourth tubular string.

43. The method according to claim 42, wherein the connecting step further comprises providing communication between the fourth tubular string and each of the first, second and third bores.

20

44. The method according to claim 41, wherein the installing step further comprises installing first and second ones of the wellbore junction, the

third bore of the first wellbore junction being in communication with a fourth bore of the second wellbore junction.

45. The method according to claim 44, wherein in the installing step,
5 the second wellbore junction is smaller in size than the first wellbore junction, and wherein the first wellbore junction is positioned in a first wellbore portion having a greater inner diameter than a second wellbore portion in which the second wellbore junction is positioned.

10 46. The method according to claim 40, wherein the installing step further comprises connecting the wellbore junction to a fourth tubular string.

47. The method according to claim 46, wherein the connecting step further comprises providing communication between the fourth tubular string
15 and each of the first, second and third bores.

48. The method according to claim 40, further comprising the step of radially spacing apart by approximately 120 degrees the first, second and third bores in the wellbore junction.